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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,809	06/20/2003	Keith C. Hong	183-01	9261
27569	7590	08/10/2005	EXAMINER	
			TSOY, ELENA	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/600,809	HONG ET AL.
	Examiner	Art Unit
	Elena Tsoy	1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 20 June 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 19-38 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-18 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 20 June 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/23/04, 10/4/04.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

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**Election/Restrictions**

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-18, drawn to a process for producing algae resistant roofing granules, classified in class 427, subclass 212.
- II. Claims 19-38, drawn to a process for producing algae resistant roofing shingles, classified in class 427, subclass 180.

***Distinctness***

The inventions are distinct, each from the other because:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case granules can be used for outdoor surfacing other than roofing.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

A telephone call was made to Mr. Alex R. Sluzas on July 21, 2005 to request an oral election to the above restriction requirement, but did not result in an election being made.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

***Double Patenting***

1. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

2. Claims 16, 17 are objected to under 37 CFR 1.75 as being a substantial duplicate of claim 7, 8. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1, 5-8, 16-17 are provisionally rejected under the judicially created doctrine of double patenting over claims 1-12, 21, 25 of copending Application No. 10/600,847. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since claims of current application are broader than those of copending Application No. 10/600,847.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 5-8, 13, 14, 16, 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Joedicke (US 6,214,466).

Joedicke discloses a process for producing algae resistant roofing granules, the process comprising applying to base granules a first coating composition containing sodium silicate, a kaolin clay (aluminosilicate) and a combination of cuprous oxide and zinc sulfide, and kiln-firing the coated granules (See column 2, lines 45-65), cooling the fired coated granules and applying to the algicide bearing granules a second coating composition containing sodium silicate, a kaolin clay and a pigment (claimed colorant composition), and kiln-firing the colorant-coated algicide bearing granules 740-760 <sup>0</sup>F (393-404<sup>0</sup>C) (See column 4, lines 25-31) to fuse the binder (See column 3, lines 8-14).

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7. Claims 1, 5-8, 16, 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Skadulis (US 3,528,842).

Skadulis discloses a process for producing algae resistant roofing granules, the process comprising applying a kaolin (aluminosilicate) containing coating (See column 4, line 17) to greystone or nepheline syenite granules of #11 grade in a tumbling barrel type mixer, pre-drying the granules and transferring them to a rotary firing pot and firing at 950 °F (510°C) (See column 4, lines 25-31), then applying to the formed base particles an aqueous composition containing cuprous oxide followed by firing at 700 °F (371°C) to insolubilize the silicate coating (See column 4, lines 32-49).

8. Claims 1, 5-8, 16, 17 are rejected under 35 U.S.C. 102(b) as being anticipated by McMahon (US 3,507,676).

McMahon discloses a process for producing algae resistant roofing granules, the process comprising applying a kaolin (aluminosilicate) containing coating to greystone or nepheline syenite granules (See column 3, lines 44-48) of #11 grade in a tumbling barrel type mixer, pre-drying the granules and transferring them to a rotary firing pot and firing at 950 °F (510°C) (See column 4, lines 15-34), then applying to the formed base particles an aqueous composition containing zinc oxide followed by firing at 700 °F (371°C) to insolubilize the silicate coating (See column 4, lines 35-52).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2-4, 15, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joedicke/Skadulis/McMahon in view of Jungk (US 4,946,505).

Joedicke/Skadulis/McMahon are applied here for the same reasons as above.

Joedicke/Skadulis/McMahon fail to teach that instead of using #11 grade, the base particles are prepared from a mixture including stone dust and a binder (Claim 2); the mixture is formed into base particles by a forming process selected from press molding, cast molding, injection molding, extrusion, spray granulation, gel casting, pelletizing, compaction and agglomeration (Claim 4, 15).

Jungk teaches that dusty powders can be granulated by means of conventional rotating pelletizing drum or plate before their use (See column 3, lines 52-62) so that no dust will be raised as the granules are handled (See column 3, lines 13-17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used stone dust in Joedicke/Skadulis/McMahon by first granulating the dusty stone by means of conventional rotating pelletizing drum or plate and an aqueous solution of a binder before their use no dust will be raised as the granules are handled, as taught by Jungk.

11. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joedicke/Skadulis in view of Jungk, further in view of Ryan et al (US 6306795).

Joedicke/Skadulis in view of Jungk is applied here for the same reasons as above.

Joedicke/Skadulis in view of Jungk fails to teach that inorganic algaecide is provided in the base particles after the base particles are fired, an algaecide-forming compound being dissolved in a fluid to form a solution, the solution being drawn into the pores in the base particles by capillary

action to form solution-laden particles, the solution-laden particles being subsequently treated to convert the algaecide-forming compound to an inorganic algaecide (Claim 9); the algaecide-forming compound is a soluble copper salt (Claim 10).

Ryan et al teach that cuprous oxide can be incorporated into a porous carrier material such as silica/alumina (See column 10, lines 27-28) by impregnating the porous carrier material with an aqueous solution of copper salts such as copper nitrate using e.g. well known the pore-volume impregnation (PVI) method (See column 11, lines 4-7, 22-42, 50-67), air drying and calcining the impregnated porous carrier material at 200 °C-540 °C to convert the copper salt to cupric oxide, cuprous oxide, or a mixture of the two (See column 12, lines 1-22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added copper salts such as copper nitrate in an aqueous coating composition of Joedicke/Skadulis in view of Jungk instead of Cu<sub>2</sub>O (claimed slurry) before firing at 700 °F (371 °C) with the expectation of providing the desired intimate mixture of copper oxides with the porous carrier material since Ryan et al teach that cuprous oxide can be incorporated into a porous carrier material such as silica/alumina by impregnating the porous carrier material with an aqueous solution of copper salts such as copper nitrate using e.g. well known the pore-volume impregnation (PVI) method, air drying and calcining the impregnated porous carrier material at 200 °C-540 °C to convert the copper salt to cupric oxide, cuprous oxide, or a mixture of the two.

12. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skadulis.

Skadulis is applied here for the same reasons as above. Skadulis further teaches that a colored coating in a silicate binder followed by firing has been used to obtain colored granules (See column 1, lines 61-72 to column 2, lines 1-5). However, Skadulis does not expressly show that the algicide coating is further coated with a colored coating to obtain colored granules.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to have coated the algicide coating in Skadulis with a colored coating in a silicate binder followed by firing since Skadulis further teaches that a colored coating in a silicate binder followed by firing has been used to obtain colored granules.

***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is (571) 272-1429. The examiner can normally be reached on Mo-Thur. 9:00-7:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-141523. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elena Tsoy  
Primary Examiner  
Art Unit 1762

ELENA TSOY  
PRIMARY EXAMINER

*E.T.Soy*

August 8, 2005